

## CHAPTER I

### SECTION 8

# HAZARD CLASSIFICATION AND CHARACTERISTICS FOR AE

**I.8.A GENERAL.** Hazard Classification and Characteristics for AE can be found on Table I.8-1.

Table I.8-1: Hazard Classification and Characteristics For AE

| Hazard Classification/ Division | Definition  |
|---------------------------------|---|
| 1.1                             | Mass-detonate. Mass-explosion. The principal hazards are blast and fragments  |
| 1.2                             | Non-mass explosion, fragment producing. HD 1.2 includes items configured for storage and transportation that do not mass detonate when a single item or package in a stack ignites. Explosions cause these items to burn and explode progressively, a few at a time, projecting fragments, firebrands, and unexploded items from the explosion site. Blast effects are limited to the immediate vicinity.   |
| 1.2.1                           | <p>Those items with a net explosives weight for quantity-distance (NEWQD) &gt; 1.60 pounds (0.73 kg) or that exhibit fragmentation characteristics similar to or greater than (higher density, longer distance). For example: M1 105 mm projectiles regardless of NEWQD</p> <p>Small quantities of HD 1.2.1 (&lt; 450 pounds net explosives weight (NEW)), in certain packaging configurations, will react in a manner more typical of an HD 1.1 event.</p> <p>When located in structures that stop primary fragments, but which generate a secondary debris hazard (e.g. certain earth-covered magazine and hardened structures), the structural damage and debris hazards produced from these events again are more characteristic of an HD 1.1 explosion</p> |
| 1.2.2                           | Those items with an NEWQD < 1.60 pounds (0.73 kg) or that at most exhibit fragmentation characteristics similar to high-explosive 40 mm ammunition regardless of NEWQD  |
| 1.2.3                           | AE that does not exhibit any sympathetic detonation response in the stack test, and any reaction more severe than burning in the external fire test, bullet impact test, and slow cook-off test. Ammunition that satisfies the criteria for HD 1.6 with the exception of containing a non-EIDS device, or ammunition that does not exhibit any sympathetic detonation response in testing.  |

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**Table I.8-1: Hazard Classification and Characteristics for AE  
(Continued)**

| Hazard Classification/<br>Division | Definition   |
|------------------------------------|--|
| 1.3                                | Mass fire, minor blast or fragment, firebrands. HD 1.3 includes items that burn vigorously and cannot usually be extinguished in storage situations. Explosions normally will be confined to pressure ruptures of containers and will not produce propagating shock waves or damaging blast overpressure beyond the magazine distance specified in the tables. Tossing about of burning container materials, propellant, or other flaming debris may cause a severe hazard of spreading fire.  |
| 1.4                                | Moderate fire, no significant blast or fragment. Items present a fire hazard with minimal blast, fragmentation, or toxic hazards.  |
| 1.5                                | Explosive substance, very insensitive (with mass explosion hazard)   |
| 1.6                                | Explosive article, extremely insensitive   |
| 6.1                                | <p>HD 6.1 includes items that contain only toxic or incapacitating chemical agents.</p> <p>Items containing both explosives and chemical agents are included in United Nation Organization Class 1, ammunition and explosives. The specific division (that is, 1.1, HD 1.2, and so forth) is based on testing IAW TB 700–2. Items containing both explosives and toxic chemical agents require application of both the appropriate HDs 1.1 through HD 1.4 quantity and distance as well as the HD 6.1 hazard zone distances.</p> <p>Hazard zones for toxic chemical agents are determined by the relative toxicity of the agents, the amount released to the atmosphere and the rate at which they are released (that is, evaporation, pressure, or explosives dispersal), terrain features, and meteorological conditions. Hazard zone calculations are based on maximum credible events (MCEs), using DDESB TP 10.</p> |